1. (previously presented) An ultrasonic intracavity probe for scanning a volumetric region from within the body comprising:

a handle section to be held during use of the probe; and

a shaft section having a distal end which is to be inserted into a body cavity during use of the probe;

a pivotally mounted array transducer located in a rigidly dimensioned compartment at the distal end of the shaft section;

a motor located in the handle section;

a drive mechanism coupled to the motor and the array transducer which acts to move the array transducer during scanning; and

a liquid bath constrained to the shaft section to the exclusion of the handle section and located in the compartment at the distal end of the shaft, a portion of which is located between the array transducer and the distal end of the shaft during scanning,

wherein the center of gravity of the probe is located in the handle section.

2. (original) The ultrasonic intracavity probe of Claim 1, further comprising a transducer mount assembly located in the distal end of the shaft section, the array transducer being pivotally mounted to the transducer mount assembly,

wherein the liquid bath is located within the transducer mount assembly.

3. (canceled)

4. (previously presented) The ultrasonic intracavity probe of Claim 2, wherein the transducer mount assembly has a proximal termination within one and one-half inches of the terminus of the distal end of the shaft section.

5. (original) The ultrasonic intracavity probe of Claim 4, wherein 90% of the liquid bath is contained within the transducer mount assembly.

6. (original) The ultrasonic intracavity probe of Claim 1, wherein the liquid bath has a volume of less than 25 cc of liquid.

7. (original) The ultrasonic intracavity probe of Claim 6, wherein the liquid bath has a volume of less than 10 cc of liquid.

8. (original) The ultrasonic intracavity probe of Claim 7, wherein the liquid bath has a volume of approximately 6 cc of liquid.

9. (original) The ultrasonic intracavity probe of Claim 1, wherein 90% of the liquid bath is located in the most distal 25% of the length of the shaft section.

10. (original) The ultrasonic intracavity probe of Claim 9, wherein the liquid bath has a volume of less than 10 cc of liquid.

11. (original) The ultrasonic intracavity probe of Claim 1, further comprising a transducer mount assembly having a main body and located in the distal end of the shaft section, the array transducer being pivotally mounted to the transducer mount assembly, the main body of the transducer mount assembly being formed of a material which is lighter than stainless steel.

12. (original) The ultrasonic intracavity probe of Claim 11, wherein the array transducer is pivotally mounted to the transducer mount assembly by a transducer cradle,

wherein the transducer cradle is made of a material which is lighter than stainless steel.

13. (original) The ultrasonic intracavity probe of Claim 12, wherein the transducer cradle includes a solid body located behind the array transducer which displaces volume in the transducer mount assembly that would otherwise be occupied by liquid.

14. (original) The ultrasonic intracavity probe of Claim 12, wherein the transducer cradle is tapered so as to pass more easily through the liquid bath.

15. (previously presented) The ultrasonic intracavity probe of Claim 11, wherein the transducer mount assembly includes wear surfaces which are made of stainless steel.

16. (original) The ultrasonic intracavity probe of Claim 15, wherein the wear surfaces are part of the drive mechanism.

17. (original) The ultrasonic intracavity probe of Claim 11, wherein the weight of the probe is less than 400 grams.

18. (original) The ultrasonic intracavity probe of Claim 17, wherein the weight of the probe is less than 300 grams.

19. (original) The ultrasonic intracavity probe of Claim 18, wherein the weight of the probe is approximately 250 grams.

20. (original) The ultrasonic intracavity probe of Claim 18, wherein the only components of the shaft which are made of a material at least equal to the density of stainless steel are components of the drive mechanism.